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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,627	02/20/2002	Greg Volgas	HCC-12 (306*203)	1948

7590 11/04/2003

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EXAMINER

CLARDY, S

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/081,627

Applicant(s)

VOLGAS ET AL.

Examiner

S. Mark Clardy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

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Claims 1-56 and new claims 57-60 are pending in this application claims the benefit under 35 USC 119(e) of US Provisional Application No. 60/270,311, filed February 21, 2001.

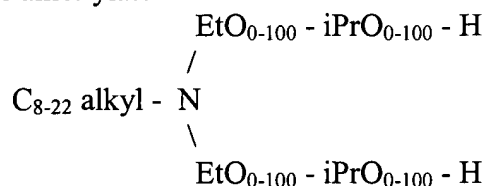
Applicants' claims are drawn to agrochemical compositions comprising:

- a) a (mono/di/tri)carboxylic in an eye irritating amount, or phosphor-ic/-ous acid

Mono-COOH:	formic, acetic, propionic, butyric, valeric	(claim 5)
Di-COOH:	oxalic, malonic, succinic, glutaric	(claim 6)
Tri-COOH:	citric	(claim 7)
	phosphoric, phosphorous acid	(claims 8, 9, 29)

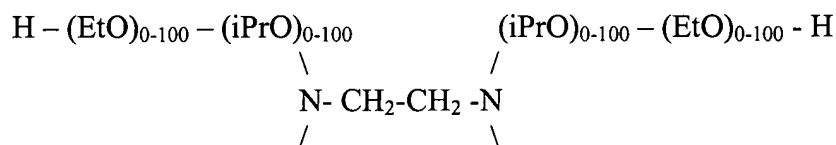
- b) an amine surfactant

fatty amine alkoxylate (claim 10)



Tallowamine ethoxylate (claim 12)

alkoxylated ethylenediamine (claim 11)



- c) a water soluble agricultural chemical (fertilizer, pesticide, micronutrient, herbicide, insecticide, fungicide); exemplified:.

glyphosate, glufosinate (claims 20-22)

chloramben, dicamba (claim 24)

phenoxy-carboxylic acid herbicides (claim 25)

pyridine carboxylic acid herbicides (claim 27).

Exemplified compositions comprise 2,4-D, glyphosate, or dicamba as active agents; tallowamine

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ethoxylate surfactant; citric, acetic, propionic, or ascorbic acid, and an optional alcohol ethoxylate surfactant.

Applicants are requested to review the specification for informalities and make the necessary corrections. For example, on page 2, beginning at line 20, the first sentence is incomplete; in the second sentence the word "irritation" should be replaced with "irritating".

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11, 33, and 52 are again rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The intended terminal group on the left side of the structure is hydroxy (see the response, pages 12-13). The structures as shown in the claims do not have left terminal hydroxy, but rather hydrogen:

Intended: $\text{H} - (\text{OCH}_2\text{CH}_2)_x(\text{OCH}_2\text{CH}(\text{Me}))_y - \text{N} \dots$

Shown: $\text{H} - (\text{CH}_2\text{CH}_2\text{O})_x(\text{CH}_2\text{CH}(\text{Me})\text{O})_y - \text{N} \dots$

Contrary to applicants' intentions, the left terminal groups are, in fact $\text{CH}_3\text{CH}_2\text{O}-$, with oxygen, rather than carbon, bonded to the nitrogen atom. The position of the oxygen atom in the alkoxy groups must be changed to accurately reflect the intended structure on the left side.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Roberts et al (US 5,877,112, cited in IDS Paper No. 2) and Turner¹. The previously cited references² are not applicable in view of applicants' amendment specifying phosphorous acid, phosphoric acid, or an eye-irritating amount of a carboxylic acid.

Roberts et al teach the utility of combining water soluble herbicides such as IPA glyphosate (col 4, line 1; claims 6, 12) with phosphate ester surfactants (col 2) and applicants' ethoxylated amine surfactants (col 3) to enhance solubility of the active agents at low pH (abstract).

Turner teaches that ethoxylated amine surfactants were known to be better than nonionic surfactants in improving glyphosate toxicity, with performance increasing with increased EO content (p. 224, lines 5-7). Further, added acidic components such as oxalic, citric, tartaric, phosphoric and lactic acids also enhanced glyphosate activity (p. 230)

One of ordinary skill in the art would be motivated to combine these references because they disclose herbicidal, specifically glyphosate, compositions and adjuvants which are useful for imparting desired characteristics to such compositions, i.e., enhanced solubility and activity.

Thus it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have combined the phosphorous acid, phosphoric acid, or carboxylic acids, with the amine surfactants and agriculturally active agents (i.e., herbicides) as claimed herein because the prior art teaches that applicants' acidic components and amine surfactants are useful for activity enhancement in herbicidal (glyphosate) compositions, and because the ethoxylated amine surfactant would function to enhance the solubility of the active agent in an acidic composition.

¹ Turner, D. J. "Effects on glyphosate performance of formulation, additives and mixing with other herbicides". Chapter 15 in *The Herbicide Glyphosate*. Grossbard et al, eds. P. 221-240. 1985.

² (Berk et al (US 5,389,598), Berger et al (US 6,121,200), Brigance (US 6,432,878), and Reiersen (US 6,329,322)).


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It is noted that various ranges or characteristics (i.e., eye irritating amounts) of the components are claimed herein. Comparative evidence of the criticality for such ranges is required.

No unobvious or unexpected results are noted; no claim is allowed.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103c and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is (703) 308-4550.


S. Mark Clardy
Primary Examiner
AU 1616

November 3, 2003